

**Table of Contents** *(scroll or use links below to navigate document)*[What They Do](#)[Tasks](#)[Skills, Knowledge, and Abilities](#)[Work Environment](#)[California's Job Outlook and Wages](#)[Trends](#)[Training](#)[Where Do I Find The Job?](#)[Where Can the Job Lead?](#)[Other Sources](#)[View Career Video](#)**What They Do**

Industrial Machinery Mechanics adjust, maintain, and repair machinery and mechanical equipment, such as pumps, motors, engines, cranes, escalators, conveyor systems, and production machinery used in factories. They are sometimes called Industrial Machinery Repairers or Machinery Maintenance Mechanics.

Industrial Machinery Mechanics perform “preventive maintenance” routines—a series of prescribed tests and measurements conducted at regular intervals on machinery to ensure continuous operation and to detect possible breakdown conditions before actual equipment failure. They also make adjustments to machinery using precision measuring instruments, and are responsible for cleaning, greasing, and oiling machinery to prevent breakdowns.

**Tasks**

- ▶ Confer with operators and observe, test, and evaluate operation of machinery and equipment to diagnose cause of malfunction.
- ▶ Disassemble machinery and equipment to remove parts and make repairs.
- ▶ Repair, replace, adjust, and align components of machinery and equipment.
- ▶ Fabricate replacement parts.
- ▶ Test-run repaired machinery and equipment to verify adequacy of repairs.
- ▶ Clean and lubricate parts, equipment, and machinery.
- ▶ Examine parts for defects, such as breakage or excessive wear.
- ▶ Weld to repair broken metal parts, fabricate new parts, and assemble new equipment.
- ▶ Record repairs and maintenance performed.
- ▶ Enter codes and instructions to program computer-controlled machinery.
- ▶ Repair and replace electrical wiring and components of machinery.
- ▶ Order or requisition parts and materials.

Detailed descriptions of this occupation may be found in the Occupational Information Network (O\*NET) at [online.onetcenter.org](http://online.onetcenter.org).

## Industrial Machinery Mechanics

### Important Skills, Knowledge, and Abilities

- ▶ **Mechanical** — Knowledge of machines and tools, including their designs, uses, repair, and maintenance.
- ▶ **Engineering and Technology** — Knowledge of the practical application of engineering science and technology. This includes applying principles, techniques, procedures, and equipment to the design and production of various goods and services.
- ▶ **Computers and Electronics** — Knowledge of circuit boards, processors, chips, electronic equipment, and computer hardware and software, including applications and programming.
- ▶ **Physics** — Knowledge and prediction of physical principles, laws, their interrelationships, and applications to understanding fluid, material, and atmospheric dynamics, and mechanical, electrical, atomic and sub-atomic structures and processes.

### Work Environment

Industrial Machinery Mechanics work in areas that are usually noisy, but well lit and ventilated. The work is sometimes dirty and greasy. Work may be inside or outside. Repair work is relatively safe; however, hazards may include cuts and bruises from sharp tools and metal objects. Safety helmets, goggles, metal-tipped shoes and other protective devices help prevent serious injuries. These workers may work alone or with other workers and trainees. Uniforms are sometimes required. Most mechanics provide their own basic tool kit, which may cost up to \$1,000.

### California's Job Outlook and Wages

The California Outlook and Wage table below represents the occupation across all industries.

Standard Occupational Classification	Estimated Number of Workers 2004	Estimated Number of Workers 2014	Average Annual Openings	2006 Wage Range (per hour)
<b>Industrial Machinery Mechanics</b>				
49-9041	12,400	13,600	370	\$17.10 to \$26.82

*Wages do not reflect self-employment.*

*Average annual openings include new jobs plus net replacements.*

*Source: [www.labormarketinfo.edd.ca.gov](http://www.labormarketinfo.edd.ca.gov), Employment Projections by Occupation and OES Employment & Wages by Occupation, Labor Market Information Division, Employment Development Department.*

### Trends

Employment of Industrial Machinery Mechanics is expected to grow slower than average for all occupations through 2014. However, with the trend toward industrial automation, with increasingly complex and more expensive machinery, there will still be a need for additional Industrial Machinery Mechanics to perform essential preventive maintenance routines. Most new machines feature more self-diagnostic capabilities and better reliability, which may reduce the need for some repair work. Because factories and other facilities cannot afford breakdowns of industrial machinery, repairers may be called to the plant at night or on weekends for emergency repairs. Overtime is common among Industrial Machinery Mechanics—more than a third work over 40 hours a week.

## Industrial Machinery Mechanics

### Training/Requirements/Apprenticeships

Many Industrial Machinery Mechanics learn their trade through a four-year apprenticeship program combining classroom instruction with on-the-job training. These programs are usually sponsored by trade unions, and prospective entrants must take examinations in subjects such as basic math. Other workers start as helpers and pick up the skills of the trade informally and by taking courses offered by machinery manufacturers and community colleges.

Mechanics learn from experienced journey-level workers how to operate, disassemble, repair, and assemble machinery. Classroom instruction focuses on subjects such as shop mathematics, blueprint reading, welding, electronics, and computer training.

Most employers prefer to hire those who have completed high school.

### Recommended High School Course Work

High school courses in mechanical drawing, mathematics, physics, computers, and electronics are especially useful.

### Where Do I Find the Job?

Industrial Machinery Mechanics usually register for work with unions. Direct application to employers is another effective job search method. Local government also hires these workers.

Use the *Search for Employers by Industry* feature on the *Career Center* page at [www.labormarketinfo.edd.ca.gov](http://www.labormarketinfo.edd.ca.gov) to locate employers in your area. Search using keywords from the following manufacturing industry names to get a list of private firms and their addresses:

- ▶ All Other Converted Paper Products
- ▶ All Other Petroleum and Coal Products
- ▶ Asphalt Paving Mixture and Block
- ▶ Asphalt Shingle and Coating Materials
- ▶ Coated and Laminated Paper
- ▶ Corrugated/Solid Fiber Box
- ▶ Dried and Dehydrated Food
- ▶ Frozen Fruit and Vegetable
- ▶ Frozen Specialty Food
- ▶ Fruit and Vegetable Canning
- ▶ Petroleum Refineries
- ▶ Specialty Canning

Search these **yellow page** headings for listings of private firms:

- ▶ Machine Shops, Machinery-Repairing
- ▶ Machinery, Specially Designed

### Where Can the Job Lead?

Advancement for Industrial Machinery Mechanics is usually in the form of salary increases. Large companies may offer promotion into supervisory positions. With advanced training and years of experience, these workers can promote into master mechanic, tool and die maker, or supervisory positions within the industry or firm.

## Industrial Machinery Mechanics

### Other Sources of Information

California Division of Apprenticeship Standards  
[www.dir.ca.gov/das](http://www.dir.ca.gov/das)

National Tooling & Machining Association  
[www.ntma.org](http://www.ntma.org)

Precision Machined Products Association  
[www.pmpa.org](http://www.pmpa.org)

# Manufacturing Careers